

**REMARKS**

Claims 1-20 are all the claims pending in the application. It is noted with appreciation that claims 1-14 have been allowed. Also, although claims 15, 16, 18 and 19 are objected to as containing an informality, addressed below, no prior art rejections have been entered against these claims. Thus, these claims should be allowable as well. Claims 17 and 20 are the only claims that have been rejected based on prior art.

***Specification:***

The Examiner has objected to the title of the invention as not being descriptive. Applicants have amended the title of the invention to be more descriptive of the invention. Approval of the new title is respectfully requested.

***Claim Objections:***

Claims 15, 16, and 18-20 are objected because of informalities. The Examiner states that the dependencies are at the end of the claim, instead of being at the beginning of the claims. Applicants have amended these claims to be independent. It is respectfully submitted that no change in scope has been introduced by these amendments.

***Claim Rejections Under 35 U.S.C. §§ 102 and 103:***

Claims 17 and 20 are rejected under 35 U.S.C. § 102(e) as being anticipated by Solak (U.S. Patent No. 5,821,865). Claim 20 is additionally rejected under 35 U.S.C. § 103(a) as being unpatentable over Solak. For the following reasons, Applicants respectfully traverse these rejections.

Claim 17 of the present application recites, a method of indicating particle transmittance including the steps of, detecting the amount of smoke passing through a detection chamber;

summing the amount of detected smoke passing through the detection chamber over time to ascertain total integrated smoke hours; comparing the total amount of smoke passed through the detection chamber with a predetermined value; and sending a signal indicating when the total integrated smoke hours has exceeded the predetermined value.

It is respectfully submitted that the system of Solak fails to disclose or suggest such a method. Solak teaches a system having a smoke sensor within a compartment of a Christmas decoration. The device is described as having a smoke sensor closing a circuit means upon detecting a pre-determined amount of smoke particles collected in the compartment upon entry through an aperture. Although the particle detection mechanism taught by Solak is not well described, the use of the word “collected” appears to suggest that the particles are captured in the chamber until a detection threshold is reached.

It is submitted that Solak does not teach a method of “indicating particle transmittance”. As explained in the specification the particle transmittance of a filter is the ratio of detectable particle level output by a filter to the detectable particle level input to the filter. Solak does not teach or suggest that some type of transmission ratio (i.e. transmittance) could be measured with its system. Solak merely teaches that the number of particles collected can be measured.

Solak also fails to teach the step of detecting the *amount of smoke passing through a detection chamber*. Rather the device of Solak appears to collect particles and work out how many particles it has collected, meaning that no particles pass through its detection chamber.

The present invention also calls for *summing the amount of detected smoke passing through the detection chamber over time to ascertain total integrated smoke hours*. It is submitted that Solak does not do this, since as noted above, it appears to collect the particles themselves. The present system in ‘summing’, avoids the necessity of collecting smoke

particles, as would be required in the Solak system, since a summing operation is sufficient to eliminate the need for a compartment containing smoke particles collected over the lifetime of the system.

Further, at no point does Solak disclose the calculation of the total *integrated smoke hours*.

In an alternative interpretation of Solak, the system disclosed therein could be viewed as detecting the instantaneous particle concentration in its chamber (as opposed to permanently capturing particles). In this case, Solak still fails to disclose the claimed invention since it does not teach any form of summing detected particle level in the *chamber over time to ascertain total integrated smoke hours*.

For at least the reasons above, Applicants submit that the invention recited in claim 17 is both novel and inventive over Solak.

Claim 20 includes the same limitations discussed above. As such, it is submitted that claim 20 is likewise patentable over Solak.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Brian W. Hannon/

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER

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Brian W. Hannon  
Registration No. 32,778

Date: September 25, 2008